

prevailed, and the entire month was favorable for the filling and ripening of grain and the growth of late crops, such as corn, potatoes, hops, and fruit.—*Edward A. Beals, Forecast Official.*

#### HAVANA, CUBA, FORECAST DISTRICT.

The only important disturbance of the month in the West Indies advanced from the vicinity of Barbados to the Yucatan Channel from the 2d to the 7th. [It is believed that this is the storm which reached the Texas coast by the morning of the 9th, where it caused high winds and high tides, as noted in the Galveston Forecast District report.—*E. B. G.*]

On the 2d the Barbados light-ship *Flummense* encountered a gale 60 miles north-northwest of Barbados. On the 4th severe storms were reported on the southern coast of Haiti. Ample warnings of the character and course of this disturbance were sent to points in its line of advance. Daily wind forecasts for the Atlantic and Gulf of Mexico north of Cuba and east and west of Florida were telephoned the captain of the port.—*W. B. Stockman, Forecast Official.*

#### RIVERS AND FLOODS.

The Mississippi River below the mouth of the Missouri was somewhat higher than during June, and considerably higher than during July, 1900. Below the mouth of the Missouri it averaged from 3 to 7 feet lower, the loss below Cairo, Ill., being directly attributable to the rapid decline in the Ohio, which was decidedly lower than during June. The stages, however, were not sufficiently low to interfere with navigation, and did not materially differ from those of July, 1900.

The Missouri fell steadily throughout the month, though not to any great extent.

The rivers of the East presented nothing of special interest, except in the Carolinas where heavy rains from the 12th to the 20th, inclusive, caused rapid rises to near or slightly above the danger lines at many places. Timely warnings were issued wherever necessary, and no serious damage was reported.

On the 27th of the month the Arkansas River at Little Rock, Ark., fell to a stage of 1.1 feet, one foot lower than during any previous July, the record extending back to 1872, and was still lower at other places within the State.

The Brazos River was also lower, and there was a steady fall in the rivers of the Pacific coast system.

The highest and lowest water, mean stage, and monthly range at 135 river stations are given in Table VII. Hydrographs for typical points on seven principal rivers are shown on Chart V. The stations selected for charting are: Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport on the Red.—*H. C. Frankenfield, Forecast Official.*

#### AREAS OF HIGH AND LOW PRESSURE.

*Movements of centers of areas of high and low pressure.*

Number.	First observed.			Last observed.			Path.		Average velocities.	
	Date.	Lat. N.	Long. W.	Date.	Lat. N.	Long. W.	Length.	Duration.	Daily.	Hourly.
<b>High areas.</b>							<i>Miles.</i>	<i>Days.</i>	<i>Miles.</i>	<i>Miles.</i>
I.....	6, a.m.	41	101	9, p.m.	38	75	2,455	3.5	701	29.2
II.....	9, p.m.	48	104	13, p.m.	33	65	2,500	4.0	625	25.0
III.....	17, a.m.	50	100	30, p.m.	39	74	1,920	3.5	548	22.8
IV.....	22, a.m.	50	97	24, a.m.	33	80	1,200	2.0	600	25.0
V.....	23, a.m.	53	122	28, p.m.	45	67	3,680	5.5	669	27.9
VI.....	29, a.m.	50	111	*2, a.m.	37	86	1,900	4.0	475	19.8
<b>Sums.....</b>							13,655	22.5	3,618	150.7
Mean of 6 paths.....							2,276		608	25.1
Mean of 22.5 days.....									607	25.3
<b>Low areas.</b>										
I.....	1, p.m.	41	118	8, a.m.	46	60	4,150	6.5	638	26.6
II.....	5, a.m.	20	77	10, a.m.	29	95	1,200	5.0	240	10.0
III.....	6, a.m.	54	114	9, a.m.	45	98	1,800	3.0	600	25.0
IV.....	8, a.m.	22	70	10, a.m.	35	75	1,050	2.0	525	21.9
V.....	18, p.m.	50	110	23, a.m.	42	54	3,000	4.5	667	27.8
VI.....	24, a.m.	44	70	26, a.m.	35	75	700	2.0	350	14.6
VII.....	27, p.m.	39	108	31, a.m.	48	68	2,400	3.5	686	26.6
<b>Sums.....</b>							14,800	26.5	3,706	154.5
Mean of 7 paths.....							2,043		529	22.1
Mean of 26.5 days.....									540	22.5

\* August.

For graphic presentation of these highs and lows see Charts I and II.—*Geo. E. Hunt, Chief Clerk Forecast Division.*

#### CLIMATE AND CROP SERVICE.

By JAMES BERRY, Chief of Climate and Crop Service Division.

The following summaries relating to the general weather and crop conditions are furnished by the directors of the respective sections of the Climate and Crop Service of the Weather Bureau.

[Temperature is expressed in degrees Fahrenheit and precipitation in inches and hundredths.]

**Alabama.**—The mean temperature was 82.2°, or 2.1° above normal; the highest was 108°, at Bermuda on the 12th, and the lowest, 56°, at Maple Grove on the 9th and at Riverton on the 10th. The average precipitation was 3.40, or 1.54 below normal; the greatest monthly amount, 8.95, occurred at Mobile, and the least, 0.35, at Notasulga.

The month, as a whole, was generally unfavorable for growth of all crops, except cotton, which made satisfactory progress. Prolonged drought in some northern, north-central, and south-central counties, together with excessively hot, parching winds during middle of month seriously damaged corn and gardens. Rainfall somewhat excessive in extreme southern and extreme northeastern counties.—*F. P. Chaffee.*

**Arizona.**—The mean temperature was 85.5°, or 2.8° above normal; the highest was 123°, at Mohawk Summit on the 9th and at Maricopa on the 10th, and the lowest, 31°, at Fort Defiance on the 7th. The average precipitation was 2.04, or 0.64 above normal; the greatest

monthly amount, 6.40, occurred at Pantano, and the least, trace, at a number of stations.

Light and widely scattered showers, high drying winds, with lack of water supply for irrigation purposes, during the first and second decades of the month seriously retarded plant growth, and farming operations were confined mostly to harvesting. A damaging frost occurred in the northeast section of the territory on the 7th, Fort Defiance reporting a minimum temperature of 31°. From the 20th to 31st general and beneficial rains occurred in all parts of the Territory, and the month closed with ranges greatly revived and irrigating canals running full.—*L. M. Dey, Jr.*

**Arkansas.**—The mean temperature was 83.7°, or 3.5° above normal; the highest was 116, at Jonesboro on the 12th, and the lowest, 50°, at Pond on the 10th. The average precipitation was 2.50, or 1.35 below normal; the greatest monthly amount, 7.55, occurred at Hot Springs (near), and the least, 0.10, at Arkansas City.

Showers fell in many sections, but were so light and scattered that very little benefit was derived. The temperature was excessively high during the greater portion of the month, and corn suffered greatly from the hot, dry weather; the first planted began to twist early in the month and the late planted was not doing well. Toward and during the last weeks of the month early planted corn had been so badly in-